

HumiSeal











SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation

Humiseal 1B18

of the mixture

Registration number

None.

Product code

Synonyms

HumiSeal Europe 1B18

Issue date

07-July-2015

Version number

03

Revision date

27-November-2017

Supersedes date

07-July-2015

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Protective Coating for Printed Circuit Board

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name

HUMISEAL EUROPE LTD.

Address

505 Eskdale Road

Winnersh

Wokingham Berkshire RG41 5TU

Division

A CHASE CORPORATION COMPANY

Telephone

General Assistance

44 (0) 118 944 2333

europetechsupport@chasecorp.com

e-mail

Not available.

Contact person 1.4. Emergency telephone

Chemtrec USA

1-800-424-9300

number

OutSide USA +1 703-741-5970

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Flammable liquids

Category 2

H225 - Highly flammable liquid and

vapour.

Health hazards

Serious eye damage/eye irritation

Category 2

H319 - Causes serious eye

irritation.

Specific target organ toxicity - single

exposure

Category 3 narcotic effects

H336 - May cause drowsiness or

dizziness.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard

Category 3

H412 - Harmful to aquatic life with

long lasting effects.

Material name: Humiseal 1B18

SDS UK

May be ignited by heat, sparks or flames. May cause drowsiness and dizziness. Causes serious

eye irritation. Dangerous for the environment if discharged into watercourses.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Methyl ethyl ketone, n-Butyl acetate

Hazard pictograms



Signal word Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing mist or vapour.
P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/eye protection/face protection.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water/shower.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing.

P312 Call a PÓISON CENTRE/doctor if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P370 + P378 In case of fire: Use appropriate media to extinguish.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information

27.68 % of the mixture consists of component(s) of unknown acute oral toxicity. 83.06 % of the mixture consists of component(s) of unknown acute dermal toxicity. 44.18 % of the mixture consists of component(s) of unknown acute inhalation toxicity. 99.56 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 44.18 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. 44.18 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
n-Butyl acetate	50 - < 60	123-86-4 204-658-1	01-2119485493-29-xxxx	607-025-00-1	

Classification: Flam. Liq. 3;H226, STOT SE 3;H336, Aquatic Chronic 3;H412

CAS-No. / EC INDEX No. Chemical name % **REACH Registration No. Notes** No. Methyl ethyl ketone 10 - < 20 78-93-3 01-2119457290-43-xxxx 606-002-00-3 # 201-159-0 Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336 Classification:

Other components below reportable levels 20 - < 30

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008. DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance. PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the **General information**

material(s) involved, and take precautions to protect themselves. Wash contaminated clothing

before reuse.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON

CENTRE or doctor/physician if you feel unwell.

Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical Skin contact

attention if irritation develops and persists.

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if Eye contact

present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Rinse mouth. Get medical attention if symptoms occur. Ingestion

4.2. Most important symptoms and effects, both acute and

delayed

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Highly flammable liquid and vapour.

5.1. Extinguishing media

Suitable extinguishing

media

Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing

media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do

so without risk.

Use standard firefighting procedures and consider the hazards of other involved materials. Specific methods

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

6.3. Methods and material for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil etc) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapour. Avoid contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Туре	Value	
STEL	899 mg/m3	
	300 ppm	
TWA	600 mg/m3	
	200 ppm	
STEL	966 mg/m3	
	200 ppm	
TWA	724 mg/m3	
	150 ppm	
	STEL TWA STEL	STEL 899 mg/m3 300 ppm TWA 600 mg/m3 200 ppm STEL 966 mg/m3 200 ppm TWA 724 mg/m3

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU Components Type Value

2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
, ,	TWA	300 ppm 600 mg/m3
		200 ppm

Biological limit values

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling time	
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	70 umol/l	Butan-2-one	Urine	*	

^{* -} For sampling details, please see the source document.

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels

(DNELs)

Not available.

Predicted no effect

concentrations (PNECs)

Not available.

Exposure guidelines

UK EH40 WEL: Skin designation

Methyl ethyl ketone (CAS 78-93-3)

Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

General informationUse personal protective equipment as required. Personal protection equipment should be chosen

according to the CEN standards and in discussion with the supplier of the personal protective

equipment.

Eye/face protection

Chemical respirator with organic vapour cartridge and full facepiece.

Skin protection

- Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove

supplier.

Other Wear suitable protective clothing.

Respiratory protection Chemical respirator with organic vapour cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using do not smoke. Always observe good personal hygiene measures, such as washing

after handling the material and before eating, drinking, and/or smoking. Routinely wash work

clothing and protective equipment to remove contaminants.

Environmental exposure

controls

Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Liquid.
Form Liquid.
Colour Clear.

Odour Aromatic

Odour threshold Not available.
pH Does not apply.

Melting point/freezing point -86.64 °C (-123.95 °F) estimated Initial boiling point and boiling 79.59 °C (175.26 °F) estimated

range

Flash point 11.0 °C (51.8 °F)

Evaporation rate3.2 BuAc **Flammability (solid, gas)**Not applicable. **Upper/lower flammability or explosive limits**

Flammability limit - lower

1.4 % estimated

(%)

Flammability limit - upper

10 % estimated

(%)

Vapour pressure 39.54 hPa estimated

Vapour density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Negligible

Partition coefficient Not available.

(n-octanol/water)

Material name: Humiseal 1B18 SDS UK

404 °C (759.2 °F) estimated **Auto-ignition temperature**

Decomposition temperature Not available. Not available. Viscosity Not explosive. **Explosive properties** Oxidising properties Not oxidising

9.2. Other information

250 cP **Brookfield viscosity** Density 0.92 g/cm3 Percent volatile 70.5 % Specific gravity 0.92 70.5 %

SECTION 10: Stability and reactivity

10.1. Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Material is stable under normal conditions. 10.2. Chemical stability

10.3. Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials

Strong oxidising agents. Nitrates. Ammonia. Amines. Isocyanates. Caustics.

10.5. Incompatible materials

10.6. Hazardous decomposition products

10.4. Conditions to avoid

No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be

harmful.

Skin contact No adverse effects due to skin contact are expected.

Causes serious eye irritation. Eye contact

May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of Ingestion

occupational exposure.

Headache. May cause drowsiness and dizziness. Nausea, vomiting. Severe eye irritation. **Symptoms**

Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

11.1. Information on toxicological effects

Acute toxicity Narcotic effects.

Due to partial or complete lack of data the classification is not possible. Skin corrosion/irritation

Serious eye damage/eye

irritation

Causes serious eye irritation.

Due to partial or complete lack of data the classification is not possible. Respiratory sensitisation Skin sensitisation Due to partial or complete lack of data the classification is not possible. Due to partial or complete lack of data the classification is not possible. Germ cell mutagenicity Due to partial or complete lack of data the classification is not possible. Carcinogenicity Due to partial or complete lack of data the classification is not possible. Reproductive toxicity

Specific target organ toxicity -

single exposure

May cause drowsiness and dizziness.

Specific target organ toxicity -

repeated exposure

Due to partial or complete lack of data the classification is not possible.

Due to partial or complete lack of data the classification is not possible. **Aspiration hazard**

Mixture versus substance

information

No information available.

Not available. Other information

SECTION 12: Ecological information

12.1. Toxicity Harmful to aquatic life with long lasting effects.

Components Species Test results

Methyl ethyl ketone (CAS 78-93-3)

Aquatic

Crustacea EC50 Water flea (Daphnia magna) 4025 - 6440 mg/l, 48 hours

Fish LC50 Sheepshead minnow (Cyprinodon > 400 mg/l, 96 hours

variegatus)

n-Butyl acetate (CAS 123-86-4)

Aquatic

Fish LC50 Fathead minnow (Pimephales promelas) 17 - 19 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and

No data is available on the degradability of this product.

degradability

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Methyl ethyl ketone 0.29 n-Butyl acetate 1.78

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT Not available.

and vPvB assessment

12.6. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation

potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal

EU waste codeThe Waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow

this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches

with chemical or used container. Dispose of contents/container in accordance with

local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

name

14.1. UN number UN1263

14.2. UN proper shipping

PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)

(vapour pressure at 50 °C more than

110 kPa)

14.3. Transport hazard class(es)

Class 3
Subsidiary risk Label(s) 3
Hazard No. (ADR) 33
Tunnel restriction code D/E
14.4. Packing group II
14.5. Environmental hazards No.

14.6. Special precautions

Material name: Humiseal 1B18

Read safety instructions, SDS and emergency procedures before handling.

for user

RID

14.1. UN number UN1263

14.2. UN proper shipping PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid

ame lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)

14.3. Transport hazard class(es)

Class 3
Subsidiary risk Label(s) 3
14.4. Packing group ||
14.5. Environmental hazards No.

14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.

for user

ADN

14.1. UN number UN1263

14.2. UN proper shipping namePaint ([including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or paint related material (including paint thinning and reducing compound)]

14.3. Transport hazard class(es)

Class 3
Subsidiary risk Label(s) 3
14.4. Packing group ||
14.5. Environmental hazards No.

14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.

for user

IATA

14.1. UN number UN1263 **14.2. UN proper shipping** PAINT

name

14.3. Transport hazard class(es)

Class 3
Subsidiary risk
14.4. Packing group II

14.5. Environmental hazards No.
ERG Code 3L

14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.

for user

Other information

Passenger and cargo

aircraft

Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

IMDG

14.1. UN number UN1263 **14.2. UN proper shipping** PAINT

name

14.3. Transport hazard class(es)

Class 3
Subsidiary risk 14.4. Packing group II
14.5. Environmental hazards
Marine pollutant No.
EmS F-E, S-E

14.6. Special precautions

for user

Read safety instructions, SDS and emergency procedures before handling.

14.7. Transport in bulk Not established.

according to Annex II of Marpol

and the IBC Code

ADN; ADR; IATA; IMDG; RID



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended Methyl ethyl ketone (CAS 78-93-3)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Methyl ethyl ketone (CAS 78-93-3) n-Butyl acetate (CAS 123-86-4)

Other regulations The product is classified and labelled in accordance with EC directives or respective national laws.

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations Follow national regulation for work with chemical agents.

15.2. Chemical safety

assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations Not available.

References Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation

methods and test data, if available.

Full text of any H-statements not written out in full under

Sections 2 to 15 H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

Revision information SECTION 2: Hazards identification: Prevention

SECTION 2: Hazards identification: Supplemental label information Composition / Information on Ingredients: Ingredient Classification

SECTION 16: Other information: Disclaimer

Training information Follow training instructions when handling this material.

Disclaimer The information and recommendations in this safety data sheet are, to the best of our knowledge,

accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, expressed or implied. It is the responsibility of the user to determine the applicability of this

information and the suitability of the material or product for any particular purpose

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